U.S. HOUSE OF REPRESENTATIVES
COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY
SUBCOMMITTEE ON RESEARCH AND SCIENCE EDUCATION

HEARING CHARTER

Ensuring the Best Stewardship of American Taxpayer Dollars at the National Science Foundation

Wednesday, May 9, 2012
2:00 p.m. - 4:00 p.m.
2318 Rayburn House Office Building

1. Purpose

On Wednesday, May 9, 2012, the Committee on Science, Space, and Technology Subcommittee on Research and Science Education will hold a hearing to provide oversight of the National Science Foundation (NSF), including the examination of various issues identified by the NSF Office of Inspector General.

2. Witness

Ms. Allison C. Lerner, Inspector General, National Science Foundation

3. Overview

- Ensuring effective stewardship of taxpayer dollars is essential to an efficient government.

- The National Science Foundation (NSF) is an independent federal agency with a current annual budget of $7 billion. It is the funding source for approximately 40 percent of all federally supported non-medical basic research conducted by America's colleges and universities. In many fields such as mathematics, computer science and the social sciences, NSF is the major source of federal funding.

- The NSF Office of Inspector General (OIG) provides independent oversight of the Foundation's programs and operations. The OIG is responsible for promoting efficiency and effectiveness in agency programs and for preventing and detecting fraud, waste, and abuse. The Fiscal Year 2013 (FY13) budget request for the NSF OIG is $14.2 million, equal to the FY12 estimate.

- As part of the 2009 American Recovery and Reinvestment Act (ARRA), the NSF OIG received $2 million to provide oversight of NSF's ARRA funds.

- The use of contingency funding relative to three MREFC projects has recently been under review by the NSF OIG, totaling over $226 million in unallowable contingency costs.

- The September 2011 OIG Report to Congress includes the closing of 50 investigations, five research misconduct cases resulting in findings by NSF, and the recovery of $12,903,449.[1]

4. Background

National Science Foundation (NSF)

Established by an Act of Congress in 1950, the National Science Foundation (NSF) is an independent federal agency created "to promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense…" Unlike any other federal agency, the mission of NSF includes support for all fields of fundamental science and engineering, except for medical sciences. NSF is charged with keeping the United States at the leading edge of discovery in areas from astronomy to geology to zoology. In addition to funding research in the traditional academic areas, the agency also supports "high-risk, high pay-off" ideas, novel collaborations, and training for tomorrow's top scientists and engineers.[2]

NSF is the primary source of federal funding for non-medical basic research, providing approximately 40 percent of all federal support, and serves as a catalyst for science, technology, engineering, and mathematics (STEM) education improvement at all levels of education. NSF is the major source of federal funding for many fields like mathematics, computer science, and the social sciences. It supports the fundamental investigations that ultimately serve as the foundation for progress in nationally significant areas such as national security, technology-driven economic growth, energy independence, health care, nanotechnology, and networking and information technology.

Through over 11,000 new awards per year, NSF supports an average of 285,000 scientists, engineers, educators and students at universities, laboratories and field sites all over the U.S. and throughout the world. These grants fund specific research proposals that have been judged the most promising by a rigorous and objective merit-review system. In the past few decades, NSF-funded researchers have won more than 180 Nobel Prizes.

[1] *NSF OIG Semiannual Report to Congress*, September 2011, p. 3.
[2] http://www.nsf.gov/about/

National Science Foundation (NSF) Spending and Fiscal Year 2013 Budget Request

(dollars in millions)

Account	FY11 Actual	FY12 Estimate	FY13 Request	FY13 Request versus FY12 Estimate	
				$	%
Research and Related Activities (RRA)	**5608.4**	**5689.0**	**5983.3**	**294.3**	**5.2**
Biological Sciences (BIO)	*712.3*	*712.4*	*733.9*	*21.5*	*3.0*
Computer and Info. Science and Engineering (CISE)	*636.1*	*653.6*	*709.7*	*56.1*	*8.6*
Engineering (ENG)	*763.3*	*826.2*	*876.3*	*50.2*	*6.1*
Geosciences (GEO)	*885.3*	*885.3*	*906.4*	*21.2*	*2.4*
Mathematical and Physical Sciences (MSP)	*1312.4*	*1308.9*	*1345.2*	*36.2*	*2.8*
Social, Behavioral, and Economic Sciences (SBE)	*247.3*	*254.3*	*259.6*	*5.3*	*2.1*
Cyberinfrastructure (OCI)	*300.8*	*211.6*	*218.3*	*6.6*	*3.1*
International Science and Engineering (OISE)	*49.0*	*49.9*	*51.3*	*1.4*	*2.9*
Polar Programs (OPP)	*440.7*	*435.9*	*449.7*	*13.9*	*3.2*
Integrative Activities (IA)	*259.6*	*349.6*	*431.5*	*81.9*	*23.4*
U.S. Arctic Research Commission	*1.6*	*1.5*	*1.4*	*(0.1)*	*-4.1*
Education and Human Resources (EHR)	**861.0**	**829.0**	**875.6**	**46.6**	**5.6**
Major Research Equipment & Facilities Const (MREFC)	**125.4**	**197.1**	**196.2**	**(0.9)**	**-0.4**
Agency Operations & Award Management	**299.3**	**299.4**	**299.4**	**0**	**0**
National Science Board (NSB)	**4.5**	**4.4**	**4.4**	**0**	**0**
Office of Inspector General (OIG)	**14.0**	**14.2**	**14.2**	**0**	**0**
Totals:	**6912.6**	**7033.1**	**7373.1**	**340**	**4.8**

Office of Inspector General[3]

Each federal agency has an Office of Inspector General (OIG) that provides independent oversight of an agency's programs and operations. The OIG is responsible for promoting efficiency and effectiveness in agency programs and for preventing and detecting fraud, waste, and abuse.

Pursuant to the Inspector General Act Amendments of 1988, the National Science Board established OIG and, under the statute, confers on OIG the responsibility and authority to:

- Conduct and supervise audits of NSF programs and operations, including organizations that receive NSF funding;
- Conduct investigations concerning NSF programs and operations, including organizations that receive NSF funding;
- Evaluate allegations of research misconduct, such as fabrication, falsification, or plagiarism, involving individuals who participate in NSF-funded activities;
- Provide leadership, coordination, and policy recommendations for:

[3] http://www.nsf.gov/oig/

  - Promoting economy, efficiency, and effectiveness in the administration of NSF programs and operations, and
  - Preventing and detecting fraud and abuse in NSF programs and operations; and
- Issue semiannual reports to the NSB and Congress to keep them informed about problems, recommended corrective actions, and progress being made in improving the management and conduct of NSF programs.[4]

Also by statute, the NSF OIG is independent from the Foundation. The Inspector General (IG) reports directly to the National Science Board and to Congress. OIG working relationships with NSF and its awardees help to focus OIG efforts on priority areas.

The Fiscal Year 2013 (FY13) budget request for the OIG includes $14.2 million, a level equal to the FY12 estimate. The FY13 request "identifies the resources needed to support OIG, including amounts for personnel compensation and benefits, contract services, training, travel, supplies, materials, and equipment."[5]

The OIG is responsible for assessing internal controls, financial management, information technology, and other systems that affect the operation of NSF programs. The OIG work includes identifying individuals who attempt to abuse the public trust or defraud government programs and enforcing integrity in agency operations.

The OIG conducts independent and objective audits, investigations, and other reviews to support NSF in its mission by promoting the economy, efficiency, and effectiveness and safeguarding the integrity of NSF programs and operations. The OIG strives to prevent problems, to address existing issues in a timely and proportionate manner, and to keep abreast of emerging challenges and opportunities.[6] The OIG maintains a fraud, waste and abuse hotline and encourages NSF employees, grantees, principal investigators, or others working on NSF programs, grants, or contracts, to contact OIG with allegations or suspicions of fraud, waste, abuse, mismanagement, and research misconduct. The OIG is comprised of auditors, investigators, attorneys, scientists, and other specialists.

Office of Audit[7]

The Office of Audit (OA) is responsible for auditing grants, contracts, and cooperative agreements funded by NSF programs. OA reviews agency operations and ensures that the financial, administrative, and programmatic aspects of agency operations are conducted economically and efficiently.

OA conducts financial audits to determine whether costs claimed by awardees are allowable, reasonable, and properly allocated as well as performance audits that identify problems so Foundation managers can improve operations. In addition, OA is responsible for the annual audit of the National Science Foundation's financial statements, which includes evaluations of

[4] *FY13 NSF Budget Request to Congress*, p. OIG-2.
[5] *FY13 NSF Budget Request to Congress*, p. OIG-1.
[6] http://www.nsf.gov/oig/mandv.jsp
[7] http://www.nsf.gov/oig/officeofaudits.jsp

internal controls and data processing systems. Audits are conducted in accordance with the Government Auditing Standards and fall within two main areas: External and Internal.

Audits seek to identify costly practices that may be modified so that funds can be used for other purposes that taxpayers consider more important. By providing independent and objective assessments of NSF's program and financial performance, OA works to improve NSF's business policies and practices to better support the Foundation in promoting science and engineering research and education. In order to accomplish its mission, OA works to maintain open communication and work in partnership with NSF management. OA supports the Foundation by ensuring NSF award administration policies, as well as other federally required regulations, are properly followed.

Office of Investigations[8]

The Office of Investigations (OI) assesses and investigates allegations of wrongdoing and develops and coordinates outreach efforts. OI investigates wrongdoing involving organizations or individuals that receive awards from, conduct business with, or work for NSF. OI assesses the seriousness of misconduct and recommends proportionate action. When appropriate, the results of these investigations are referred to the Department of Justice or other prosecutorial authorities for criminal prosecution or civil litigation, or to NSF management for administrative resolution. Investigations are conducted in a thorough and impartial manner and are consistent with the requirements of the Quality Standards for Federal Offices of Inspector General.

Criminal and civil investigators focus on allegations of intentional diversion of NSF funds and material false statements in information submitted to the Foundation. Intentional diversion of NSF funds for personal use is a criminal act, which can be prosecuted under several statutes. NSF awardees are required to notify NSF of any significant problems relating to their NSF awards.

Administrative investigators focus on violations of rules, regulations, or policy including allegations of research misconduct (falsification, fabrication, and plagiarism). Research misconduct erodes the integrity of the research enterprise and strikes at the core of NSF's mission; it is a special focus of investigative efforts within OIG. NSF awardees are required to notify NSF when they determine a research misconduct allegation has substance and they proceed to investigation.

Outreach efforts are essential to building partnerships within the agency and with other federal agencies, NSF awardees, and research communities. These partnerships assist in promoting education on ethical issues, responsible conduct of research, and resolving integrity and efficiency matters effectively

The Office of Inspector General and the American Recovery and Reinvestment Act[9]

As part of the American Recovery and Reinvestment Act (ARRA), signed into law in February 2009, NSF received $3 billion in stimulus funding and OIG received $2 million to provide

[8] http://www.nsf.gov/oig/officeofinvestigations.jsp
[9] http://www.nsf.gov/oig/recovery.jsp

oversight of NSF's ARRA funds. OIG is approaching ARRA oversight responsibilities in two phases: 1) a *proactive* phase for risk mitigation activities that can be accomplished in the near term to help prevent problems and prepare for more substantive work and; 2) an *operational* phase during which audits, investigations, and other types of reviews are conducted.

Under the auspices of the Recovery Accountability and Transparency Board, the NSF OIG is participating in a working group of OIGs from other agencies that received Recovery Act funds to coordinate activities and share best practices. The purpose of the Board is to coordinate and conduct oversight of Recovery Act funds to prevent fraud, waste and abuse.

As part of its work on ARRA oversight, OIG issued three alert memorandums concerning various Recovery Act issues that required immediate management attention and issued reports on ARRA data quality for 10 NSF awardees. OIG has also worked to assess and investigate allegations of wrongdoing involving NSF awards funded by ARRA. In the future, OIG plans to conduct more traditional types of audits and reviews that focus on ongoing operations and awards.

Contingency Issue

In an effort to keep project costs associated with Major Research Equipment and Facilities Construction (MREFC) from escalating during construction, NSF instituted a "no cost overrun policy" on any new MREFC-funded construction projects. "This policy requires that the total project cost estimate developed at the Preliminary Design Stage have adequate contingency to cover all forseeable risks, and that any cost increases not covered by contingency be accommodated by reductions in scope."[10]

The use of contingency funding relative to MREFC projects has recently been under review by the NSF OIG. In the September 2010, March 2011 and September 2011 Seminanual Reports to Congress, the IG highlighted audits of MREFC projects focused on "unallowable contingency costs." The audits in these reports focused on three separate MREFC projects: the Ocean Observatories Initiative (OIG found $88 million in unallowable contingency costs in September 2010[11]); the Advanced Technology Solar Telescope (OIG found $62 million in unallowable contingency costs in March 2011[12]); and the National Ecological Observatory Network (OIG found $76 million in unallowable contingency costs in September 2011[13]).

According to NSF, construction contingency policies are consistent with the GAO Cost Estimating and Assessment Guide and the OMB Capital Programming Guide and are part of the budget to be maintained by the project manager. However, OIG has asserted, "The audit did not find any controls or technical barriers to prevent the organization from drawing down contingency funds and spending them without NSF approval."[14] The OIG continues to work with the projects noted and NSF to resolve the concerns around contingency related funds. OIG

[10] *National Science Foundation Large Facilities Manual*, March 31, 2011, p. 18.
[11] *NSF OIG Semiannual Report to Congress*, September 2010, p. 17.
[12] *NSF OIG Semiannual Report to Congress*, March 2011, p. 8.
[13] *NSF OIG Semiannual Report to Congress*, September 2011, p. 25.
[14] *NSF OIG Semiannual Report to Congress*, September 2010, p. 5.

and the Office of Budget, Finance and Award Management (BFA) at NSF have established a working group focusing on definitional issues surrounding contingency funds and identifying adequate support for contingency charges.

In the Report to accompany H.R. 5326, the Commerce, Justice, and Science Appropriations Bill for 2013, the Appropriations Committee addressed the issue as follows:

> NSF has been engaged in a lengthy discussion process with the NSF OIG to resolve an ongoing dispute about project contingency budgets. Tens of millions of dollars of potentially unallowable contingency costs hinge on the resolution of this dispute, and the Committee believes that it is taking too long for a consensus resolution to be reached. NSF is directed to provide the Committees on Appropriations with an immediate update on the status of efforts to resolve these issues and to provide quarterly updates thereafter until such time that NSF and the OIG reach an agreement.[15]

The Office of Management and Budget's (OMB) Circular A-21 identifies cost principles for education institutions and defines contingency costs as unallowable.[16] OMB is currently considering proposed changes to this Circular that would affect budgeting for contingency costs.[17]

Other Resolved and Outstanding Issues

According to the September 2011 OIG report to Congress, "investigative staff closed 50 investigations, had five research misconduct cases result in findings by NSF, and recovered $12,903,449 for the government."[18]

Highlights from the September 2011 Report include:

- An investigation of overcharges by the contractor that provided support for the U.S. Antarctic Program, which began pursuant to a referral from the Office of Audit, led to the recovery of $11.4 million in wrongful contract charges.

- An investigation involving a principal investigator (PI) at a Georgia college who submitted false claims to NSF and NASA grants over a five year period led to a settlement agreement requiring the college to reimburse the federal government $1.2 million. The college also agreed to a five-year compliance plan and did not renew the PI's employment contract.

[15] House Report 112-463, p. 78.
[16] OMB Circular A-21 (revised 5/10/04), p.52
[17] Federal Register, Vol. 77, No. 39, Tuesday February 28, 2012: http://www.gpo.gov/fdsys/pkg/FR-2012-02-28/pdf/2012-4521.pdf
[18] *NSF OIG Semiannual Report to Congress*, September 2011, p. 3.

- More than $875,000 was recovered from four ongoing cases. In one case, an employee at a Delaware university charged fraudulent and unallowable costs to an NSF award and, during the investigation, altered records to transfer improper costs off the awards. In another case, involving duplicate funding related to NSF and Department of Energy awards, NSF terminated an award in response to the OIG recommendation, providing NSF with more than $261,000 in funds put to better use.

- An audit of NSF's oversight of grantee institutions' financial conflicts of interest programs found that NSF policy does not require it to provide monitoring and oversight of grantee institutions' implementation of their conflicts programs. In addition, institutions are not required to notify NSF when they permit research to continue without imposing restrictions on an identified conflict. As a result, NSF cannot be assured that the institutions are properly managing, reducing, or eliminating conflicts of interest or that unmanageable conflicts are being reported to NSF. [19]

The March 2012 Semiannual will be transmitted to Congress on or before May 31, 2012, in compliance with the requirements of the Inspector General Act of 1978, as amended.

[19] *Ibid.*, p. 5.